

IN THE CLAIMS:

Please add the following new claims.

17. A process for visualizing digital media, comprising the steps of:

providing a plurality of media elements;
assigning a significance weight to each of said plurality of media elements;
establishing a presentation grid;
selecting a media element for display on said presentation grid in response to said significance weights;
and,
placing said selected media element on said presentation grid.

18. The process of claim 17 where said step of assigning a significance weight further comprises the steps of:

providing an initial value for said significance weight;
and

determining if any of said document and said media elements have been selected before, and if so, increasing the significance weight of said selected document and said selected media elements in response.

19. The process of claim 17 wherein said step of assigning a significance weight further comprises the step of increasing said significance weight in response to user input.

20. The process of claim 17 wherein said step of establishing a presentation grid further comprises the steps of:

creating a plurality of cells;

establishing a grid doubly linked list associated with said presentation grid, said grid doubly linked list holding references to displayed media elements.

A₁ 21. The process of claim 17 further comprising the step of:

assigning a screen weight to said selected media elements;

preselecting a maximum number of elements that may be displayed in said presentation grid; and

if said maximum number is exceeded, removing the media element having the highest screen weight.

22. A process for visualizing digital media, comprising the steps of:

decomposing a document into a plurality of document components;

assigning a significance weight to said document and to said plurality of document components;

storing said plurality of document components as a plurality of linked media elements and document references;

establishing a presentation grid;

selecting a media element for display on said presentation grid in response to said significance weights; and,
placing said selected media element on said presentation grid.

23. The process of claim 22 further comprising the step of:
assigning a screen weight to said selected media element.

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24. The process of claim 22 wherein said decomposing step further comprises the steps of:
parsing said document; and
determining said plurality of document components using markup language tags.

25. The process of claim 24 wherein said markup language tags are HTML tags.

26. The process of claim 22 where said step of assigning a significance weight further comprises the steps of:

providing an initial value for said significance weight; and

determining if any of said document references and said media elements have been selected before, and if so, increasing the significance weight of said selected document and said selected media elements in response.

27. The process of claim 22 wherein said step of assigning a significance weight further comprises the step of increasing said significance weight in response to user input.

28. The process of claim 23 wherein said step of establishing a presentation grid further comprises the steps of:

creating a plurality of cells;

AI establishing a grid doubly linked list associated with said presentation grid, said grid doubly linked list holding pointers to displayed media elements.

29. The process of claim 28 further comprising the step of:

preselecting a maximum number of elements that may be displayed in said presentation grid; and

if said maximum number is exceeded, removing the media element having the highest screen weight.

30. The process of claim 28 further comprising the step of:

creating a grid cell object to track overlapping elements in a grid cell.

31. The process of claim 28 further comprising the steps of:

traversing said grid doubly linked list to update the screen weight of each displayed media element;

sorting said displayed media elements according to
screen weight;

preselecting a maximum number of elements that may be
displayed in said presentation grid;

if said maximum number is exceeded, removing the media
element having the highest screen weight;

rebuilding said grid doubly linked list in screen weight
order; and

AI updating said display according to said rebuilt doubly
linked list, which defines the stacking order, so that media
elements having lower screen weights are more visible to the
user.

32. The process of claim 31 wherein the step of traversing
said grid further comprising the step of:

avoiding traversing a preselected number of media
elements recently added to said presentation grid.

33. The process of claim 31 further comprising the step of:

establishing a cell doubly linked list for each cell in
said presentation grid, said cell doubly linked list holding
pointers for each overlapping element in the grid cell;

traversing each cell doubly linked list; and

updating said display according to said cell doubly
linked list.

34. The process of claim 22 wherein said step of placing a selected media element in said presentation grid further comprises the steps of:

choosing a presentation size for said selected media element;

identifying all candidate grid regions of said selected presentation size;

determining a weight for each said candidate grid region from the grid cells contained in each said candidate grid region; and

AI selecting a grid region in response to said grid region candidate weights.

35. The process of claim 34 wherein said step of determining a grid region candidate weight further comprises determining said grid region candidate weight in response to said presentation size.

36. The process of claim 34 wherein said step of choosing a presentation size further comprises the steps of:

assigning an initial size in grid units to said selected media element;

determining an initial size in number of pixels from said initial size in grid units; and

selecting a size in response to said determined number of pixels.

37. The process of claim 34 wherein said step of determining a grid region candidate weight further comprises calculating grid region candidate weights for all possible grid cell origins in said presentation grid.

A1 38. The process of claim 34 wherein said step of determining a grid region candidate weight further comprises the step of calculating said grid region candidate weight from the size of said selected media element and the screen weight of each cell in a possible grid region.

39. The process of claim 22 wherein said step of selecting a media element for display further comprises selecting a media element using a weighted random select operation.

40. The process of claim 34 further comprising the step of establishing a placement grid wherein grid regions are limited to areas of said placement grid.

41. The process of claim 34 wherein said determining step further comprises calculating said grid region candidate weights from grid cells and associated screen weights that make up an associated candidate region.

42. The process of claim 34 wherein each step of selecting a grid region for placement of a previously selected media